

exposed corneal surface; and

v) the laser shot ablating corneal tissue from the exposed corneal surface;

e) applying a second laser shot immediately subsequent to the first laser shot to the exposed corneal surface;

i) the laser shot having a wavelength of 193 nanometers;

ii) the laser shot having a diameter and an area;

iii) the laser shot having a center point;

iv) the laser shot area being smaller than the area of the exposed corneal surface; and

v) the laser shot ablating corneal tissue from the exposed corneal surface;

f) the second laser shot being spaced apart from the first laser shot;

g) the distance between the center point of the first laser shot and the center point of the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot; and,

h) repeating acts d) through g) a plurality of times.

16  
2.

(amended) A method for correcting vision comprising:

a) selecting a patient's eye for treatment;

b) folding a surface flap of corneal tissue of the selected eye aside;

c) exposing a surface of the cornea under the flap;

d) applying a first laser shot to the exposed corneal surface;

i) the laser shot having a wavelength of 193 nanometers;

ii) the laser shot having a diameter and an area;

iii) the laser shot having a center point;

iv) the laser shot area being smaller than the area of the exposed corneal surface; and,

v) the laser shot ablating corneal tissue from the exposed corneal surface;

e) applying a second laser shot immediately subsequent to the first laser shot to the exposed corneal surface;

- i) the laser shot having a wavelength of 193 nanometers;
- ii) the laser shot having a diameter and an area;
- iii) the laser shot having a center point;
- iv) the laser shot area being smaller than the area of the exposed corneal surface; and,
- v) the laser shot ablating corneal tissue from the exposed corneal surface;

f) applying a third laser shot immediately subsequent to the second laser shot to the exposed corneal surface;

- i) the laser shot having a wavelength of 193 nanometers;
- ii) the laser shot having a diameter and an area;
- iii) the laser shot having a center point;
- iv) the laser shot area being smaller than the area of the exposed corneal surface; and,
- v) the laser shot ablating corneal tissue from the exposed corneal surface;

g) the first, second and third laser shots being spaced apart from each other;

h) the distance between the center point of the first laser shot and the center point of the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot;

i) the distance between the center point of the second laser shot and the center point of the third laser shot being sufficient so that any plume of ablated material from the second laser shot will not substantially interfere with the third laser shot;

j) the distance and time between the third laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the third laser shot; and,

k) repeating acts d) through j) a plurality of times.

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3.

(amended) A method for correcting vision comprising:

- a) selecting a patient's eye for treatment;
- b) folding a surface flap of corneal tissue of the selected eye aside;
- c) exposing a surface of the cornea under the flap;
- d) applying a first laser shot to the exposed corneal surface;
  - i) the laser shot having a wavelength of 193 nanometers;
  - ii) the laser shot having a diameter and an area;
  - iii) the laser shot having a center point;
  - iv) the laser shot area being smaller than the area of the exposed

corneal surface; and,

- v) the laser shot ablating corneal tissue from the exposed corneal

surface;

e) applying a second laser shot immediately subsequent to the first laser shot to the exposed corneal surface;

- i) the laser shot having a wavelength of 193 nanometers;
- ii) the laser shot having a diameter and an area;
- iii) the laser shot having a center point;
- iv) the laser shot area being smaller than the area of the exposed

corneal surface; and,

- v) the laser shot ablating corneal tissue from the exposed corneal

surface;

f) applying a third laser shot immediately subsequent to the second laser shot to the exposed corneal surface;

- i) the laser shot having a wavelength of 193 nanometers;
- ii) the laser shot having a diameter and an area;
- iii) the laser shot having a center point;
- iv) the laser shot area being smaller than the area of the exposed

corneal surface; and,

v) the laser shot ablating corneal tissue from the exposed corneal surface;

g) applying a fourth laser shot immediately subsequent to the third laser shot to the exposed corneal surface;

i) the laser shot having a wavelength of 193 nanometers;

ii) the laser shot having a diameter and an area;

iii) the laser shot having a center point;

iv) the laser shot area being smaller than the area of the exposed corneal surface; and,

b1 v) the laser shot ablating corneal tissue from the exposed corneal surface;

h) the first, second, third and fourth laser shots being spaced apart from each other;

i) the distance between the center point of the first laser shot and the center point of the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot;

j) the distance between the center point of the third laser shot and the center of the second laser shot being sufficient so that any plume of ablated material from the second laser shot will not substantially interfere with the third laser shot;

k) the distance between the center point of the fourth laser shot and the center point of the third laser shot being sufficient so that any plume of ablated material from the third laser shot will not substantially interfere with the fourth laser shot;

l) the distance and time between the third laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the third laser shot;

m) the distance and time between the fourth laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the fourth laser shot; and,

n) repeating acts d) through m) a plurality of times.

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(amended) A method for correcting vision comprising:

a) applying a first laser shot to a selected area of a corneal surface of an eye;

- i) the laser shot having a wavelength of 193 nanometers;
- ii) the laser shot having a diameter and an area;
- iii) the laser shot having a center point;
- iv) the laser shot area being smaller than the area of the corneal

surface; and,

- v) the laser shot ablating corneal tissue from the corneal surface;

b) applying a second laser shot immediately subsequent to the first laser shot to the corneal surface;

- i) the laser shot having a wavelength of 193 nanometers;
- ii) the laser shot having a diameter and an area;
- iii) the laser shot having a center point;
- iv) the laser shot area being smaller than the area of the corneal

surface; and,

- v) the laser shot ablating corneal tissue from the corneal surface;

c) the second laser shot being spaced apart from the first laser shot;

d) the distance between the center point of the first laser shot and the center point of the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot;

e) repeating acts a) through d) a plurality of times.

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5.

(amended) A method for correcting vision comprising:

a) applying a first laser shot to a selected area of a corneal surface of an eye;

- i) the laser shot having a wavelength of 193 nanometers;
- ii) the laser shot having a diameter and an area;
- iii) the laser shot having a center point;

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iv) the laser shot area being smaller than the area of the corneal surface; and,

v) the laser shot ablating corneal tissue from the corneal surface;

b) applying a second laser shot immediately subsequent to the first laser shot to the corneal surface;

i) the laser shot having a wavelength of 193 nanometers;

ii) the laser shot having a diameter and an area;

iii) the laser shot having a center point;

iv) the laser shot area being smaller than the area of the corneal surface; and,

v) the laser shot ablating corneal tissue from the corneal surface;

c) applying a third laser shot immediately subsequent to the second laser shot to the exposed corneal surface;

i) the laser shot having a wavelength of 193 nanometers;

ii) the laser shot having a diameter and an area;

iii) the laser shot having a center point;

iv) the laser shot area being smaller than the area of the corneal surface; and,

v) the laser shot ablating corneal tissue from the corneal surface;

d) the first, second and third laser shots being spaced apart from each other;

e) the distance between the center point of the first laser shot and the center point of the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot;

f) the distance between the center point of the second laser shot and the center of the third laser shot being sufficient so that any plume of ablated material from the second laser shot will not substantially interfere with the third laser shot;

g) the distance and time between the third laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the third laser shot; and,

h) repeating acts a) through g) a plurality of times.

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16. (amended) A method for correcting vision comprising:

a) applying a first laser shot to a selected area of a corneal surface of an eye;

- i) the laser shot having a wavelength of 193 nanometers;
- ii) the laser shot having a diameter and an area;
- iii) the laser shot having a center point;
- iv) the laser shot area being smaller than the area of the corneal

surface; and,

v) the laser shot ablating corneal tissue from the corneal surface;

b) applying a second laser shot immediately subsequent to the first laser shot to the corneal surface;

- i) the laser shot having a wavelength of 193 nanometers;
- ii) the laser shot having a diameter and an area;
- iii) the laser shot having a center point;
- iv) the laser shot area being smaller than the area of the corneal

surface; and,

v) the laser shot ablating corneal tissue from the corneal surface;

c) applying a third laser shot immediately subsequent to the second laser shot to the corneal surface;

- i) the laser shot having a wavelength of 193 nanometers;
- ii) the laser shot having a diameter and an area;
- iii) the laser shot having a center point;
- iv) the laser shot area being smaller than the area of the corneal

surface; and,

v) the laser shot ablating corneal tissue from the corneal surface;

d) applying a fourth laser shot immediately subsequent to the third laser shot to the corneal surface;

- i) the laser shot having a wavelength of 193 nanometers;

ii) the laser shot having a diameter and an area;  
iii) the laser shot having a center point;  
iv) the laser shot area being smaller than the area of the corneal surface; and,

v) the laser shot ablating corneal tissue from the corneal surface;  
e) the first, second, third and fourth laser shots being spaced apart from each other;

f) the distance between the center point of the first laser shot and the center point of the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot;

g) the distance between the center point of the third laser shot and the center of the second laser shot being sufficient so that any plume of ablated material from the second laser shot will not substantially interfere with the third laser shot;

h) the distance between the center point of the fourth laser shot and the center point of the third laser shot being sufficient so that any plume of ablated material from the third laser shot will not substantially interfere with the fourth laser shot;

i) the distance and time between the third laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the third laser shot;

j) the distance and time between the fourth laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the fourth laser shot; and,

k) repeating acts a) through j) a plurality of times.

7. (amended) A method for correcting vision comprising:  
folding a flap of corneal tissue of an eye aside, exposing a surface of the cornea under the flap;  
selecting a pattern for the placement of laser beam pulses on the exposed surface of the cornea;



B1 the selected pattern comprising at least three points, the points being spaced apart from each other;

applying a first laser pulse to the exposed corneal surface at the first point in the pattern, applying a second laser pulse immediately subsequent to the first laser pulse to the exposed corneal surface at the second point in the pattern, and applying a third laser pulse immediately subsequent to the second laser pulse to the exposed corneal surface at the third point in the pattern;

the laser pulses ablating an area of tissue from the exposed surface of the cornea;

the ablated area of tissue from the second pulse being spaced apart from the ablated area of tissue from the first pulse; and,

the area of ablated tissue from the third pulse being spaced apart from the area of ablated tissue of the second pulse.

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8.

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(amended) The method of claim 7 wherein the area of ablated tissue from the third shot is spaced apart from the area of tissue of the first shot.

B2 8002

11. (amended) A method for correcting vision comprising:

selecting a pattern for the placement of laser beam pulses on an eye;

the selected pattern comprising at least three points; the points being spaced apart from each other;

applying a first laser pulse to the corneal surface of the eye at the first point in the pattern, applying a second laser pulse immediately subsequent to the first laser pulse to the corneal surface at the second point in the pattern, and applying a third laser pulse immediately subsequent to the second laser pulse to the corneal surface at the third point in the pattern;

the laser pulses ablating an area of tissue from the cornea of the eye;

the ablated area of tissue from the second pulse being spaced apart from the ablated area of tissue from the first pulse; and,

B2 the area of ablated tissue from the third pulse being spaced apart from the area of ablated tissue of the second pulse.

<sup>24</sup>12 (amended) <sup>23</sup>The method of claim 11 wherein the area of ablated tissue from the third shot is spaced apart from the area of tissue of the first shot.

13 (amended) The method of claim 11 wherein the laser pulses are from an excimer laser.

B3 <sup>26</sup>15 (amended) A method for correcting vision comprising:

- a) selecting a patient's eye for treatment;
- b) folding a flap of corneal tissue of the selected eye aside;
- c) exposing a surface of the cornea under the flap;
- d) selecting a spatially distributed shot pattern for applying a laser beam to the exposed surface of the cornea;
- e) applying a first laser shot to the exposed corneal surface;
  - i) the laser shot having a diameter and an area;
  - ii) the laser shot having a center point;
  - iii) the laser shot area being smaller than the area of the exposed corneal surface; and,
  - iv) the laser shot ablating corneal tissue from the exposed corneal surface;
- f) applying a second laser shot immediately subsequent to the first laser shot to the exposed corneal surface;
  - i) the laser shot having a diameter and an area;
  - ii) the laser shot having a center point;
  - iii) the laser shot area being smaller than the area of the exposed corneal surface; and,
  - iv) the laser shot ablating corneal tissue from the exposed corneal surface;

B3

g) applying a third laser shot immediately subsequent to the second laser shot to the exposed corneal surface;

i) the laser shot having a diameter and an area;  
ii) the laser shot having a center point;  
iii) the laser shot area being smaller than the area of the exposed corneal surface; and,

iv) the laser shot ablating corneal tissue from the exposed corneal surface;

h) the second laser shot being spaced apart from the first laser shot; the third laser shot being spaced apart from the first and second laser shots so that a cloud of ablated particles can dissipate in one place before contacting that area again with another laser shot; and,

i) repeating acts e) through h) a plurality of times to apply the spatially distributed shot pattern.

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B4

<sup>28</sup>  
17. (amended) A method for correcting vision comprising:

a) selecting a patient's eye for treatment;  
b) selecting a spatially distributed shot pattern of laser beam shots;  
c) selecting an area of the cornea of the eye for applying the spatially distributed laser beam shot pattern;

d) applying a first laser shot to the selected area of the corneal surface;  
i) the laser shot having a diameter and an area;  
ii) the laser shot having a center point;  
iii) the laser shot area being smaller than the selected area of the corneal surface; and,

iv) the laser shot ablating corneal tissue from the selected area of the corneal surface;

f) applying a second laser shot immediately subsequent to the first laser shot to the selected area of the corneal surface;

i) the laser shot having a diameter and an area;

ii) the laser shot having a center point;  
iii) the laser shot area being smaller than the selected area of the corneal surface; and,  
iv) the laser shot ablating corneal tissue from the selected area of the corneal surface;

B4 g) applying a third laser shot immediately subsequent to the second laser shot to the selected area of the corneal surface;

i) the laser shot having a diameter and an area;  
ii) the laser shot having a center point;  
iii) the laser shot area being smaller than the area of the selected area of the corneal surface; and,

iv) the laser shot ablating corneal tissue from the selected area of the corneal surface;

h) the second laser shot being spaced apart from the first laser shot; the third laser shot being spaced apart from the first and second laser shots so that a cloud of ablated particles can dissipate in one place before contacting that area again with another laser shot; and,

i) repeating acts e) through h) a plurality of times to apply the spatially distributed shot pattern.

B5 19.30 (amended) A method for correcting vision comprising:

a) selecting a patient's eye for treatment;  
b) folding a surface flap of corneal tissue of the selected eye aside;  
c) exposing a surface of the cornea under the flap;  
d) applying a first laser shot to the exposed corneal surface;  
i) the laser shot having a diameter and an area;  
ii) the laser shot having a center point;  
iii) the laser shot area being smaller than the area of the exposed corneal surface; and

iv) the laser shot ablating corneal tissue from the exposed corneal surface;

e) applying a second laser shot immediately subsequent to the first laser shot to the exposed corneal surface;

i) the laser shot having a diameter and an area;

ii) the laser shot having a center point;

iii) the laser shot area being smaller than the area of the exposed corneal surface; and,

iv) the laser shot ablating corneal tissue from the exposed corneal surface;

f) the second laser shot being spaced apart from the first laser shot;

g) the distance between the center point of the first laser shot and the center point of the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot; and,

h) repeating acts d) through g) a plurality of times.

31  
20.

(amended) A method for correcting vision comprising:

a) selecting a patient's eye for treatment;

b) folding a surface flap of corneal tissue of the selected eye aside;

c) exposing a surface of the cornea under the flap;

d) applying a first laser shot to the exposed corneal surface;

i) the laser shot having a diameter and an area;

ii) the laser shot having a center point;

iii) the laser shot area being smaller than the area of the exposed corneal surface; and,

iv) the laser shot ablating corneal tissue from the exposed corneal surface;

e) applying a second laser shot immediately subsequent to the first laser shot to the exposed corneal surface;

i) the laser shot having a diameter and an area;

ii) the laser shot having a center point;  
iii) the laser shot area being smaller than the area of the exposed corneal surface; and,  
iv) the laser shot ablating corneal tissue from the exposed corneal surface;

f) applying a third laser shot immediately subsequent to the second laser shot to the exposed corneal surface;

35  
i) the laser shot having a diameter and an area;  
ii) the laser shot having a center point;  
iii) the laser shot area being smaller than the area of the exposed corneal surface; and  
iv) the laser shot ablating corneal tissue from the exposed corneal surface;

g) the first, second and third laser shots being spaced apart from each other;

h) the distance between the center point of the first laser shot and the center point of the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot;

i) the distance between the center point of the second laser shot and the center point of the third laser shot being sufficient so that any plume of ablated material from the second laser shot will not substantially interfere with the third laser shot;

j) the distance and time between the third laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the third laser shot; and,

k) repeating acts d) through j) a plurality of times.

32  
21. (amended) A method for correcting vision comprising:

- a) selecting a patient's eye for treatment;
- b) folding a surface flap of corneal tissue of the selected eye aside;
- c) exposing a surface of the cornea under the flap;

d) applying a first laser shot to the exposed corneal surface;  
i) the laser shot having a diameter and an area;  
ii) the laser shot having a center point;  
iii) the laser shot area being smaller than the area of the exposed corneal surface; and

iv) the laser shot ablating corneal tissue from the exposed corneal surface;

e) applying a second laser shot immediately subsequent to the first laser shot to the exposed corneal surface;

i) the laser shot having a diameter and an area;  
ii) the laser shot having a center point;  
iii) the laser shot area being smaller than the area of the exposed corneal surface; and,

iv) the laser shot ablating corneal tissue from the exposed corneal surface;

f) applying a third laser shot immediately subsequent to the second laser shot to the exposed corneal surface;

i) the laser shot having a diameter and an area;  
ii) the laser shot having a center point;  
iii) the laser shot area being smaller than the area of the exposed corneal surface; and,

iv) the laser shot ablating corneal tissue from the exposed corneal surface;

g) applying a fourth laser shot immediately subsequent to the third laser shot to the exposed corneal surface;

i) the laser shot having a diameter and an area;  
ii) the laser shot having a center point;  
iii) the laser shot area being smaller than the area of the exposed corneal surface; and,

iv) the laser shot ablating corneal tissue from the exposed corneal surface;

h) the first, second, third and fourth laser shots being spaced apart from each other;

i) the distance between the center point of the first laser shot and the center point of the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot;

135 j) the distance between the center point of the third laser shot and the center of the second laser shot being sufficient so that any plume of ablated material from the second laser shot will not substantially interfere with the third laser shot;

k) the distance between the center point of the fourth laser shot and the center point of the third laser shot being sufficient so that any plume of ablated material from the third laser shot will not substantially interfere with the fourth laser shot;

l) the distance and time between the third laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the third laser shot;

m) the distance and time between the fourth laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the fourth laser shot; and,

n) repeating acts d) through m) a plurality of times.

33  
22. (amended) A method for correcting vision comprising:

a) applying a first laser shot to a selected area of a cornea of an eye;

i) the laser shot having a diameter and an area;

ii) the laser shot having a center point;

iii) the laser shot area being smaller than the area of the cornea;

and

iv) the laser shot ablating corneal tissue from the cornea;

b) applying a second laser shot immediately subsequent to the first laser shot to the cornea;



- i) the laser shot having a diameter and an area;
- ii) the laser shot having a center point;
- iii) the laser shot area being smaller than the area of the cornea;

and,

- iv) the laser shot ablating corneal tissue from the cornea;
- c) the second laser shot being spaced apart from the first laser shot;
- d) the distance between the center point of the first laser shot and the center point of the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot;
- e) repeating acts a) through d) a plurality of times.

<sup>34</sup>  
~~23~~ (amended) A method for correcting vision comprising:

- a) applying a first laser shot to a selected area of a cornea of an eye;
  - i) the laser shot having a wavelength of 193 nanometers;
  - ii) the laser shot having a diameter and an area;
  - iii) the laser shot having a center point;
  - iv) the laser shot area being smaller than the area of the cornea;

and

- v) the laser shot ablating corneal tissue from the cornea;
- b) applying a second laser shot immediately subsequent to the first laser shot to the cornea;
  - i) the laser shot having a diameter and an area;
  - ii) the laser shot having a center point;
  - iii) the laser shot area being smaller than the area of the cornea;

and

- iv) the laser shot ablating corneal tissue from the cornea;
- c) applying a third laser shot immediately subsequent to the second laser shot to the exposed cornea;
  - i) the laser shot having a diameter and an area;
  - ii) the laser shot having a center point;

- and
- iii) the laser shot area being smaller than the area of the cornea;
- and
- iv) the laser shot ablating corneal tissue from the cornea;
- d) the first, second and third laser shots being spaced apart from each other;
- e) the distance between the center point of the first laser shot and the center point of the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot;
- B5
- f) the distance between the center point of the second laser shot and the center of the third laser shot being sufficient so that any plume of ablated material from the second laser shot will not substantially interfere with the third laser shot;
- g) the distance and time between the third laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the third laser shot; and,
- h) repeating acts a) through g) a plurality of times.

35

~~24~~ (amended) A method for correcting vision comprising:

- a) applying a first laser shot to a selected area of a cornea of an eye;
    - i) the laser shot having a diameter and an area;
    - ii) the laser shot having a center point;
    - iii) the laser shot area being smaller than the area of the cornea;
- and,
- iv) the laser shot ablating corneal tissue from the cornea;
- b) applying a second laser shot immediately subsequent to the first laser shot to the cornea;
- i) the laser shot having a diameter and an area;
  - ii) the laser shot having a center point;
  - iii) the laser shot area being smaller than the area of the cornea;
- and
- iv) the laser shot ablating corneal tissue from the cornea;

c) applying a third laser shot immediately subsequent to the second laser shot to the cornea;

- i) the laser shot having a diameter and an area;
- ii) the laser shot having a center point;
- iii) the laser shot area being smaller than the area of the cornea;

and

- iv) the laser shot ablating corneal tissue from the cornea;

B5 d) applying a fourth laser shot immediately subsequent to the third laser shot to the cornea;

- i) the laser shot having a diameter and an area;
- ii) the laser shot having a center point;
- iii) the laser shot area being smaller than the area of the cornea;

and

- iv) the laser shot ablating corneal tissue from the cornea;

e) the first, second, third and fourth laser shots being spaced apart from each other;

f) the distance between the center point of the first laser shot and the center point of the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot;

g) the distance between the center point of the third laser shot and the center of the second laser shot being sufficient so that any plume of ablated material from the second laser shot will not substantially interfere with the third laser shot;

h) the distance between the center point of the fourth laser shot and the center point of the third laser shot being sufficient so that any plume of ablated material from the third laser shot will not substantially interfere with the fourth laser shot;

i) the distance and time between the third laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the third laser shot;

j) the distance and time between the fourth laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the fourth laser shot; and,

k) repeating acts a) through j) a plurality of times.

36  
25.

(amended) A method for correcting vision comprising:

- B5
- a) selecting a patient's eye for treatment;
  - b) folding a surface flap of corneal tissue of the selected eye aside;
  - c) exposing a surface of the cornea under the flap;
  - d) applying a first laser shot to the exposed corneal surface;
    - i) the laser shot having a wavelength of 193 nanometers;
    - ii) the laser shot having a diameter and an area;
    - iii) the laser shot having a center point;
    - iv) the laser shot area being smaller than the area of the exposed

corneal surface; and

- v) the laser shot ablating corneal tissue from the exposed corneal

surface;

e) applying a second laser shot immediately subsequent to the first laser shot to the exposed corneal surface;

- i) the laser shot having a wavelength of 193 nanometers;
- ii) the laser shot having a diameter and an area;
- iii) the laser shot having a center point;
- iv) the laser shot area being smaller than the area of the exposed

corneal surface; and

- v) the laser shot ablating corneal tissue from the exposed corneal

surface;

f) the second laser shot being spaced apart from the first laser shot;

g) the distance and time between the first laser shot and the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot; and,

h) repeating acts d) through g) a plurality of times.

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26.

(amended) A method for correcting vision comprising:

- a) selecting a patient's eye for treatment;
- b) folding a surface flap of corneal tissue of the selected eye aside;
- c) exposing a surface of the cornea under the flap;
- d) applying a first laser shot to the exposed corneal surface;
  - i) the laser shot having a wavelength of 193 nanometers;
  - ii) the laser shot having a diameter and an area;
  - iii) the laser shot having a center point;
  - iv) the laser shot area being smaller than the area of the exposed

corneal surface; and

v) the laser shot ablating corneal tissue from the exposed corneal surface;

e) applying a second laser shot immediately subsequent to the first laser shot to the exposed corneal surface;

- i) the laser shot having a wavelength of 193 nanometers;
- ii) the laser shot having a diameter and an area;
- iii) the laser shot having a center point;
- iv) the laser shot area being smaller than the area of the exposed

corneal surface; and

v) the laser shot ablating corneal tissue from the exposed corneal surface;

f) applying a third laser shot immediately subsequent to the second laser shot to the exposed corneal surface;

- i) the laser shot having a wavelength of 193 nanometers;
- ii) the laser shot having a diameter and an area;
- iii) the laser shot having a center point;
- iv) the laser shot area being smaller than the area of the exposed

corneal surface; and

v) the laser shot ablating corneal tissue from the exposed corneal surface;

g) the first, second and third laser shots being spaced apart from each other;

h) the distance and time between the first laser shot and the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot;

135 i) the distance between the second laser shot and the third laser shot being sufficient so that any plume of ablated material from the second laser shot will not substantially interfere with the third laser shot;

j) the distance and time between the third laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the third laser shot; and,

k) repeating acts d) through j) a plurality of times.

27.

(amended) A method for correcting vision comprising:

a) selecting a patient's eye for treatment;

b) folding a surface flap of corneal tissue of the selected eye aside;

c) exposing a surface of the cornea under the flap;

d) applying a first laser shot to the exposed corneal surface;

i) the laser shot having a wavelength of 193 nanometers;

ii) the laser shot having a diameter and an area;

iii) the laser shot having a center point;

iv) the laser shot area being smaller than the area of the exposed corneal surface; and

v) the laser shot ablating corneal tissue from the exposed corneal surface;

e) applying a second laser shot immediately subsequent to the first laser shot to the exposed corneal surface;

i) the laser shot having a wavelength of 193 nanometers;

ii) the laser shot having a diameter and an area;  
iii) the laser shot having a center point;  
iv) the laser shot area being smaller than the area of the exposed corneal surface; and  
v) the laser shot ablating corneal tissue from the exposed corneal surface;

f) applying a third laser shot immediately subsequent to the second laser shot to the exposed corneal surface;

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i) the laser shot having a wavelength of 193 nanometers;  
ii) the laser shot having a diameter and an area;  
iii) the laser shot having a center point;  
iv) the laser shot area being smaller than the area of the exposed corneal surface; and  
v) the laser shot ablating corneal tissue from the exposed corneal surface;

g) applying a fourth laser shot immediately subsequent to the third laser shot to the exposed corneal surface;

i) the laser shot having a wavelength of 193 nanometers;  
ii) the laser shot having a diameter and an area;  
iii) the laser shot having a center point;  
iv) the laser shot area being smaller than the area of the exposed corneal surface; and  
v) the laser shot ablating corneal tissue from the exposed corneal surface;

h) the first, second, third and fourth laser shots being spaced apart from each other;

i) the distance and time between the first laser shot and the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot;

j) the distance and time between the third laser shot and the second laser shot being sufficient so that any plume of ablated material from the second laser shot will not substantially interfere with the third laser shot;

k) the distance and time between the fourth laser shot and the third laser shot being sufficient so that any plume of ablated material from the third laser shot will not substantially interfere with the fourth laser shot;

l) the distance and time between the third laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the third laser shot;

B5 m) the distance and time between the fourth laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the fourth laser shot; and,

n) repeating acts d) through m) a plurality of times.

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28.

(amended) A method for correcting vision comprising:

a) applying a first laser shot to a selected area of a cornea of an eye;

i) the laser shot having a wavelength of 193 nanometers;

ii) the laser shot having a diameter and an area;

iii) the laser shot having a center point;

iv) the laser shot area being smaller than the area of the cornea;

and

v) the laser shot ablating corneal tissue from the cornea;

b) applying a second laser shot immediately subsequent to the first laser shot to the cornea;

i) the laser shot having a wavelength of 193 nanometers;

ii) the laser shot having a diameter and an area;

iii) the laser shot having a center point;

iv) the laser shot area being smaller than the area of the cornea;

and,

v) the laser shot ablating corneal tissue from the cornea;



- c) the second laser shot being spaced apart from the first laser shot;
- d) the distance and time between the first laser shot and the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot;
- e) repeating acts a) through d) a plurality of times.

<sup>40</sup>  
~~29.~~ (amended) A method for correcting vision comprising:

- BS
- a) applying a first laser shot to a selected area of a cornea of an eye;
    - i) the laser shot having a wavelength of 193 nanometers;
    - ii) the laser shot having a diameter and an area;
    - iii) the laser shot having a center point;
    - iv) the laser shot area being smaller than the area of the cornea;

and

- v) the laser shot ablating corneal tissue from the cornea;

b) applying a second laser shot immediately subsequent to the first laser shot to the cornea;

- i) the laser shot having a wavelength of 193 nanometers;
- ii) the laser shot having a diameter and an area;
- iii) the laser shot having a center point;
- iv) the laser shot area being smaller than the area of the cornea;

and

- v) the laser shot ablating corneal tissue from the cornea;

c) applying a third laser shot immediately subsequent to the second laser shot to the exposed cornea;

- i) the laser shot having a wavelength of 193 nanometers;
- ii) the laser shot having a diameter and an area;
- iii) the laser shot having a center point;
- iv) the laser shot area being smaller than the area of the cornea;

and

- v) the laser shot ablating corneal tissue from the cornea;

d) the first, second and third laser shots being spaced apart from each other;

e) the distance and time between the first laser shot and the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot;

f) the distance and time between the second laser shot and the third laser shot being sufficient so that any plume of ablated material from the second laser shot will not substantially interfere with the third laser shot;

g) the distance and time between the third laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the third laser shot; and,

h) repeating acts a) through g) a plurality of times.

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31.

(amended) A method for correcting vision comprising:

a) selecting a patient's eye for treatment;

b) folding a surface flap of corneal tissue of the selected eye aside;

c) exposing a surface of the cornea under the flap;

d) applying a first laser shot to the exposed corneal surface;

i) the laser shot having a diameter and an area;

ii) the laser shot having a center point;

iii) the laser shot area being smaller than the area of the

exposed corneal surface; and

iv) the laser shot ablating corneal tissue from the exposed corneal surface;

e) applying a second laser shot immediately subsequent to the first laser shot to the exposed corneal surface;

i) the laser shot having a diameter and an area;

ii) the laser shot having a center point;

iii) the laser shot area being smaller than the area of the

exposed corneal surface; and

iv) the laser shot ablating corneal tissue from the exposed corneal surface;

f) the second laser shot being spaced apart from the first laser shot;

g) the distance and time between the first laser shot and the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot; and,

h) repeating acts d) through g) a plurality of times.

32.

(amended) A method for correcting vision comprising:

a) selecting a patient's eye for treatment;

b) folding a surface flap of corneal tissue of the selected eye aside;

c) exposing a surface of the cornea under the flap;

d) applying a first laser shot to the exposed corneal surface;

i) the laser shot having a diameter and an area;

ii) the laser shot having a center point;

iii) the laser shot area being smaller than the area of the exposed

corneal surface; and

iv) the laser shot ablating corneal tissue from the exposed corneal surface;

e) applying a second laser shot immediately subsequent to the first laser shot to the exposed corneal surface;

i) the laser shot having a diameter and an area;

ii) the laser shot having a center point;

iii) the laser shot area being smaller than the area of the exposed

corneal surface; and

iv) the laser shot ablating corneal tissue from the exposed corneal surface;

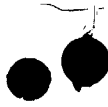
f) applying a third laser shot immediately subsequent to the second laser shot to the exposed corneal surface;

i) the laser shot having a diameter and an area;

- ii) the laser shot having a center point;
- iii) the laser shot area being smaller than the area of the exposed corneal surface; and
- iv) the laser shot ablating corneal tissue from the exposed corneal surface;
- g) the first, second and third laser shots being spaced apart from each other;
- h) the distance and time between the first laser shot and the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot;
- i) the distance between the second laser shot and the third laser shot being sufficient so that any plume of ablated material from the second laser shot will not substantially interfere with the third laser shot;
- j) the distance and time between the third laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the third laser shot; and,
- k) repeating acts d) through j) a plurality of times.

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23.

- (amended) A method for correcting vision comprising:
- a) selecting a patient's eye for treatment;
- b) folding a surface flap of corneal tissue of the selected eye aside;
- c) exposing a surface of the cornea under the flap;
- d) applying a first laser shot to the exposed corneal surface;
- i) the laser shot having a diameter and an area;
- ii) the laser shot having a center point;
- iii) the laser shot area being smaller than the area of the exposed corneal surface; and
- iv) the laser shot ablating corneal tissue from the exposed corneal surface;



e) applying a second laser shot immediately subsequent to the first laser shot to the exposed corneal surface;

- i) the laser shot having a diameter and an area;
- ii) the laser shot having a center point;
- iii) the laser shot area being smaller than the area of the exposed corneal surface; and
- iv) the laser shot ablating corneal tissue from the exposed corneal surface;

f) applying a third laser shot immediately subsequent to the second laser shot to the exposed corneal surface;

- i) the laser shot having a diameter and an area;
- ii) the laser shot having a center point;
- iii) the laser shot area being smaller than the area of the exposed corneal surface; and
- iv) the laser shot ablating corneal tissue from the exposed corneal surface;

g) applying a fourth laser shot immediately subsequent to the third laser shot to the exposed corneal surface;

- i) the laser shot having a diameter and an area;
- ii) the laser shot having a center point;
- iii) the laser shot area being smaller than the area of the exposed corneal surface; and
- iv) the laser shot ablating corneal tissue from the exposed corneal surface;

h) the first, second, third and fourth laser shots being spaced apart from each other;

- i) the distance and time between the first laser shot and the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot;

j) the distance and time between the third laser shot and the second laser shot being sufficient so that any plume of ablated material from the second laser shot will not substantially interfere with the third laser shot;

k) the distance and time between the fourth laser shot and the third laser shot being sufficient so that any plume of ablated material from the third laser shot will not substantially interfere with the fourth laser shot;

l) the distance and time between the third laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the third laser shot;

m) the distance and time between the fourth laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the fourth laser shot; and,

n) repeating acts d) through m) a plurality of times.

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34.

(amended) A method for correcting vision comprising:

a) applying a first laser shot to a selected area of a cornea of an eye;

- i) the laser shot having a diameter and an area;
- ii) the laser shot having a center point;
- iii) the laser shot area being smaller than the area of the cornea;

and

iv) the laser shot ablating corneal tissue from the cornea;

b) applying a second laser shot immediately subsequent to the first laser shot to the cornea;

- i) the laser shot having a diameter and an area;
- ii) the laser shot having a center point;
- iii) the laser shot area being smaller than the area of the cornea;

and,

iv) the laser shot ablating corneal tissue from the cornea;

c) the second laser shot being spaced apart from the first laser shot;

d) the distance and time between the first laser shot and the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot;

e) repeating acts a) through d) a plurality of times.

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35. (amended) A method for correcting vision comprising:

- a) applying a first laser shot to a selected area of a cornea of an eye;
- i) the laser shot having a diameter and an area;
  - ii) the laser shot having a center point;
  - iii) the laser shot area being smaller than the area of the cornea;

B5 and

- iv) the laser shot ablating corneal tissue from the cornea;

b) applying a second laser shot immediately subsequent to the first laser shot to the cornea;

- i) the laser shot having a diameter and an area;
- ii) the laser shot having a center point;
- iii) the laser shot area being smaller than the area of the

cornea; and

- iv) the laser shot ablating corneal tissue from the cornea;

c) applying a third laser shot immediately subsequent to the second laser shot to the exposed cornea;

- i) the laser shot having a diameter and an area;
- ii) the laser shot having a center point;
- iii) the laser shot area being smaller than the area of the cornea;

and

- iv) the laser shot ablating corneal tissue from the cornea;

d) the first, second and third laser shots being spaced apart from each other;

e) the distance and time between the first laser shot and the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot;

f) the distance and time between the second laser shot and the third laser shot being sufficient so that any plume of ablated material from the second laser shot will not substantially interfere with the third laser shot;

g) the distance and time between the third laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the third laser shot; and,

h) repeating acts a) through g) a plurality of times.

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36.

(amended) A method for correcting vision comprising:

- a) applying a first laser shot to a selected area of a cornea of an eye;
  - i) the laser shot having a diameter and an area;
  - ii) the laser shot having a center point;
  - iii) the laser shot area being smaller than the area of the cornea;

and

- iv) the laser shot ablating corneal tissue from the cornea;

b) applying a second laser shot immediately subsequent to the first laser shot to the cornea;

- i) the laser shot having a diameter and an area;
- ii) the laser shot having a center point;
- iii) the laser shot area being smaller than the area of the cornea;

and

- iv) the laser shot ablating corneal tissue from the cornea;

c) applying a third laser shot immediately subsequent to the second laser shot to the cornea;

- i) the laser shot having a diameter and an area;
- ii) the laser shot having a center point;



iii) the laser shot area being smaller than the area of the cornea;  
and

iv) the laser shot ablating corneal tissue from the cornea;  
d) applying a fourth laser shot immediately subsequent to the third laser shot to the cornea;

- i) the laser shot having a diameter and an area;
- ii) the laser shot having a center point;
- iii) the laser shot area being smaller than the area of the cornea;

and

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iv) the laser shot ablating corneal tissue from the cornea;  
e) the first, second, third and fourth laser shots being spaced apart from each other;

f) the distance between the center point of the first laser shot and the center point of the second laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the second laser shot;

g) the distance between the center point of the third laser shot and the center of the second laser shot being sufficient so that any plume of ablated material from the second laser shot will not substantially interfere with the third laser shot;

h) the distance between the center point of the fourth laser shot and the center point of the third laser shot being sufficient so that any plume of ablated material from the third laser shot will not substantially interfere with the fourth laser shot;

i) the distance and time between the third laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the third laser shot;

j) the distance and time between the fourth laser shot and the first laser shot being sufficient so that any plume of ablated material from the first laser shot will not substantially interfere with the fourth laser shot; and,

k) repeating acts a) through j) a plurality of times.

37. (amended) A method for correcting vision comprising:

folding a flap of corneal tissue of an eye aside, exposing a surface of the cornea under the flap;

selecting a pattern for the placement of laser beam pulses on the exposed surface of the cornea;

the selected pattern comprising at least three points;

applying a first laser pulse to the exposed corneal surface at the first point in the pattern, applying a second laser pulse immediately subsequent to the first laser pulse to the exposed corneal surface at the second point in the pattern, and applying a third laser pulse immediately subsequent to the second laser pulse to the exposed corneal surface at the third point in the pattern;

the laser pulses ablating an area of tissue from the exposed surface of the cornea;

the ablated area of tissue from the second pulse being spaced apart from the ablated area of tissue from the first pulse; and,

the area of ablated tissue from the third pulse being spaced apart from the area of ablated tissue of the second pulse.

<sup>14</sup>38. (amended) The method of claim <sup>13</sup>37 wherein the area of ablated tissue from the third pulse is spaced apart from the area of tissue of the first shot.

*Sub D 4*  
41. (amended) A method for correcting vision comprising:  
selecting a pattern for the placement of laser beam pulses on an eye;  
the selected pattern comprising at least three points;  
applying a first laser pulse to the corneal surface of the eye at the first point in the pattern, applying a second laser pulse immediately subsequent to the first laser pulse to the corneal surface at the second point in the pattern, and applying a third laser pulse immediately subsequent to the second laser pulse to the corneal surface at the third point in the pattern;

the laser pulses ablating an area of tissue from the cornea of the eye;

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the ablated area of tissue from the second pulse being spaced apart from the ablated area of tissue from the first pulse; and,  
the area of ablated tissue from the third pulse being removed from the area of ablated tissue of the second pulse.

<sup>2</sup>  
42. (amended) The method of claim <sup>1</sup>41 wherein the area of ablated tissue from the third pulse is spaced apart from the area of tissue of the first shot.

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<sup>5</sup>  
45. (amended) A method for correcting vision comprising:

- a) selecting a patient's eye for treatment;
- b) folding a flap of corneal tissue of the selected eye aside;
- c) exposing a surface of the cornea under the flap;
- d) selecting a spatially distributed shot pattern for applying a laser beam to the exposed surface of the cornea;
- e) applying a first laser shot to the exposed corneal surface;
  - i) the laser shot having a diameter and an area;
  - ii) the laser shot having a center point;
  - iii) the laser shot area being smaller than the area of the exposed corneal surface; and
- iv) the laser shot ablating corneal tissue from the exposed corneal surface;
- f) applying a second laser shot immediately subsequent to the first laser shot to the exposed corneal surface;
  - i) the laser shot having a diameter and an area;
  - ii) the laser shot having a center point;
  - iii) the laser shot area being smaller than the area of the exposed corneal surface; and
- iv) the laser shot ablating corneal tissue from the exposed corneal surface;

g) applying a third laser shot immediately subsequent to the second laser shot to the exposed corneal surface;

B7  
i) the laser shot having a diameter and an area;  
ii) the laser shot having a center point;  
iii) the laser shot area being smaller than the area of the exposed corneal surface; and

iv) the laser shot ablating corneal tissue from the exposed corneal surface;

h) the second laser shot being spaced apart from the first laser shot; the third laser shot being spaced apart from the first and second laser shots so that a cloud of ablated particles can dissipate in one place before contacting that area again with another laser shot; and,

i) repeating acts e) through h) a plurality of times to apply the spatially distributed shot pattern.

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47. (amended) A method for correcting vision comprising:

a) selecting a patient's eye for treatment;  
b) selecting a spatially distributed shot pattern of laser beam shots;  
c) selecting an area of the cornea of the eye for applying the spatially distributed laser beam shot pattern;

d) applying a first laser shot to the selected area of the corneal surface;  
i) the laser shot having a diameter and an area;  
ii) the laser shot having a center point;  
iii) the laser shot area being smaller than the selected area of the corneal surface; and

iv) the laser shot ablating corneal tissue from the selected area of the corneal surface;

f) applying a second laser shot immediately subsequent to the first laser shot to the selected area of the corneal surface;

i) the laser shot having a diameter and an area;

- ii) the laser shot having a center point;
- iii) the laser shot area being smaller than the selected area of the corneal surface; and
- iv) the laser shot ablating corneal tissue from the selected area of the corneal surface;
- g) applying a third laser shot immediately subsequent to the second laser shot to the selected area of the corneal surface;
- i) the laser shot having a diameter and an area;
- ii) the laser shot having a center point;
- iii) the laser shot area being smaller than the area of the selected area of the corneal surface; and,
- iv) the laser shot ablating corneal tissue from the selected area of the corneal surface;
- h) the second laser shot being spaced apart from the first laser shot; the third laser shot being spaced apart from the first and second laser shots so that a cloud of ablated particles can dissipate in one place before contacting that area again with another laser shot; and,
- i) repeating acts e) through h) a plurality of times to apply the spatially distributed shot pattern.
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